

**Amendments to the Claims:**

This Listing of Claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1.-41. (Cancelled).

42. (Previously Presented) A method of screening for an inhibitor of HCV p7 protein, comprising:

- (a) incorporating a full-length HCV p7 protein into a membrane to create an HCV p7-containing membrane, wherein the HCV p7-containing membrane has an increased permeability relative to a membrane that does not contain HCV p7 protein;
- (b) contacting the HCV p7 protein with a test compound;
- (c) comparing the permeability of the HCV p7-containing membrane, wherein the HCV p7 protein has been contacted with a test compound, to the permeability of a HCV p7-containing membrane, wherein the HCV p7 protein has not been contacted with the test compound; and
- (d) observing a decrease in the permeability in the HCV p7-containing membrane, thereby identifying the inhibitor of HCV p7 protein.

43. (Previously Presented) The method according to claim 42, wherein the HCV p7 protein is selected from a member of HCV clade 1.

44. (Previously Presented) The method according to claim 42, wherein the HCV p7 protein comprises the amino acid sequence

ALENLVILNAASLAGTHGLVSFLVFFCFAWYLKGRWVPGAVYALYGMWPLLLLLA  
LPQRAYA (SEQ ID NO.: 1).

45. (Currently Amended) The method according to claim 42, wherein the HCV p7 protein comprises at least one transmembrane domain and greater than about 70% of total amino acids of the transmembrane domain are members of the group consisting of F, I, W, Y, L, V, M, P, C, and A.

46.-48. (Cancelled).

49. (Previously Presented) The method according to claim 42, wherein the HCV p7 protein is contacted with the test compound when present in the HCV p7-containing membrane.

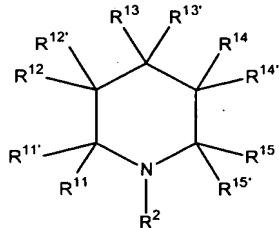
50. (Original) The method according to claim 42, wherein the permeability is compared by recording electrical currents through the membrane.

51. (Original) The method according to claim 42, wherein the membrane comprises a black lipid membrane.

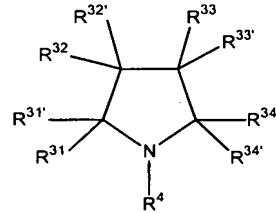
52. (Original) The method according to claim 42, wherein the test compound inhibits channel formation.

53. (Original) The method according to claim 42, wherein the test compound is a channel blocker.

54. (Original) The method according to claim 42, wherein the test compound is selected from the group consisting of compounds of formula **I** or **II**, related isomers, pharmaceutically acceptable salts, and solvates thereof:



**I**



**II**

wherein each substituent R<sup>11</sup>, R<sup>11'</sup>, R<sup>12</sup>, R<sup>12'</sup>, R<sup>13</sup>, R<sup>13'</sup>, R<sup>14</sup>, R<sup>14'</sup>, R<sup>15</sup>, R<sup>15'</sup>, R<sup>31</sup>, R<sup>31'</sup>, R<sup>32</sup>, R<sup>32'</sup>, R<sup>33</sup>, R<sup>33'</sup>, R<sup>34</sup>, and R<sup>34'</sup> is selected, independently from each other, from a group consisting of -H; -OH; -F; -Cl; -Br; -I; -NH<sub>2</sub>; alkyl- and dialkylamino; linear or branched C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl and alkynyl; aralkyl; linear or branched C<sub>1-6</sub> alkoxy; aryloxy; aralkoxy; -(alkylene)oxy(alkyl); -CN; -NO<sub>2</sub>; -COOH; -COO(alkyl); -COO(aryl); -C(O)NH(C<sub>1-6</sub> alkyl); -C(O)NH(aryl); sulfonyl; (C<sub>1-6</sub> alkyl)sulfonyl; arylsulfonyl; sulfamoyl, (C<sub>1-6</sub> alkyl)sulfamoyl; (C<sub>1-6</sub> alkyl)thio; (C<sub>1-6</sub> alkyl)sulfonamide; arylsulfonamide; -NHNH<sub>2</sub>; -NHOH; aryl; and heteroaryl; wherein each substituent may be the same or different;

wherein each alkyl, alkenyl, alkynyl, aryl, and heteroaryl moiety may be optionally substituted with one or more groups independently selected from the group consisting of -OH; -F; -Cl; -Br; -I; -NH<sub>2</sub>; alkyl- and dialkylamino; linear or branched C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl and alkynyl; aralkyl; linear or branched C<sub>1-6</sub> alkoxy, aryloxy; aralkoxy; -(alkylene)oxy(alkyl); -CN, -NO<sub>2</sub>, -COOH, -COO(alkyl); -COO(aryl); -C(O)NH(C<sub>1-6</sub> alkyl); -C(O)NH(aryl); sulfonyl; (C<sub>1-6</sub> alkyl)sulfonyl; arylsulfonyl; sulfamoyl, (C<sub>1-6</sub> alkyl)sulfamoyl; (C<sub>1-6</sub> alkyl)thio; (C<sub>1-6</sub> alkyl)sulfonamide; arylsulfonamide; -NHNH<sub>2</sub>; and -NHOH; and

R<sup>2</sup> and R<sup>4</sup> are substituents selected independently of each other from a group consisting of linear C<sub>7-18</sub> alkyl, substituted C<sub>1-18</sub> alkyl, branched C<sub>3-18</sub> alkyl, C<sub>2-18</sub> alkenyl and alkynyl, and aralkyl;

wherein each linear C<sub>7-18</sub> alkyl, branched C<sub>3-18</sub> alkyl, C<sub>2-18</sub> alkenyl and alkynyl, and aralkyl optionally may be substituted, and each substituted C<sub>1-18</sub> alkyl is substituted with one or more groups independently selected from a group consisting of -OH; -F; -Cl; -Br; -I; -NH<sub>2</sub>; alkyl- and dialkylamino; linear or branched C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl and alkynyl; aralkyl; linear or branched C<sub>1-6</sub> alkoxy, aryloxy; aralkoxy; -CN, -NO<sub>2</sub>, -COOH, -COO(alkyl); -COO(aryl); -C(O)NH(C<sub>1-6</sub> alkyl); -C(O)NH(aryl); sulfonyl; (C<sub>1-6</sub> alkyl)sulfonyl; arylsulfonyl; sulfamoyl, (C<sub>1-6</sub> alkyl)sulfamoyl; (C<sub>1-6</sub> alkyl)thio; (C<sub>1-6</sub> alkyl)sulfonamide; arylsulfonamide; -NHNH<sub>2</sub>; and -NHOH.

55. (Original) The method according to claim 42, wherein the test compound is amantadine or a derivative thereof.

56.-57. (Cancelled).

58. (Previously Presented) A method of screening for an inhibitor of HCV p7 protein, comprising:

- (a) incorporating a biotinylated full-length HCV p7 protein into a membrane to create an HCV p7-containing membrane, wherein the HCV p7-containing membrane has an increased permeability relative to a membrane that does not contain HCV p7 protein;
- (b) contacting the HCV p7 protein with a test compound;
- (c) comparing the permeability of the HCV p7-containing membrane, wherein the HCV p7 protein has been contacted with a the test compound, to the permeability of a HCV p7-containing membrane, wherein the HCV p7 protein has not been contacted with the test compound; and
- (d) observing a decrease in the permeability in the HCV p7-containing membrane, thereby identifying the inhibitor of HCV p7 protein.

59. (Previously Presented) The method according to claim 58, wherein the biotinylated HCV p7 protein comprises the amino acid sequence  
ALENLVILNAASLAGTHGLVSFLVFFCFAWYLKGRWVPGAVYALYGMWPLLLLLA  
LPQRAYA (SEQ ID NO.: 1).

60. (Currently Amended) The method according to claim 58, wherein the biotinylated HCV p7 protein comprises at least one transmembrane domain and greater than about 70% of total amino acids of the transmembrane domain are members of the group consisting of F, I, W, Y, L, V, M, P, C, and A.

61. (Cancelled).

62. (Previously Presented) The method according to claim 58, wherein the biotinylated HCV p7 protein is contacted with the test compound when present in the HCV p7-containing membrane.

63. (Previously Presented) The method according to claim 58, wherein the permeability is compared by recording electrical currents through the membrane.

64. (Previously Presented) The method according to claim 58, wherein the membrane comprises a black lipid membrane.

65. (Previously Presented) The method according to claim 58, wherein the test compound inhibits channel formation.

66. (Previously Presented) The method according to claim 58, wherein the test compound is a channel blocker.